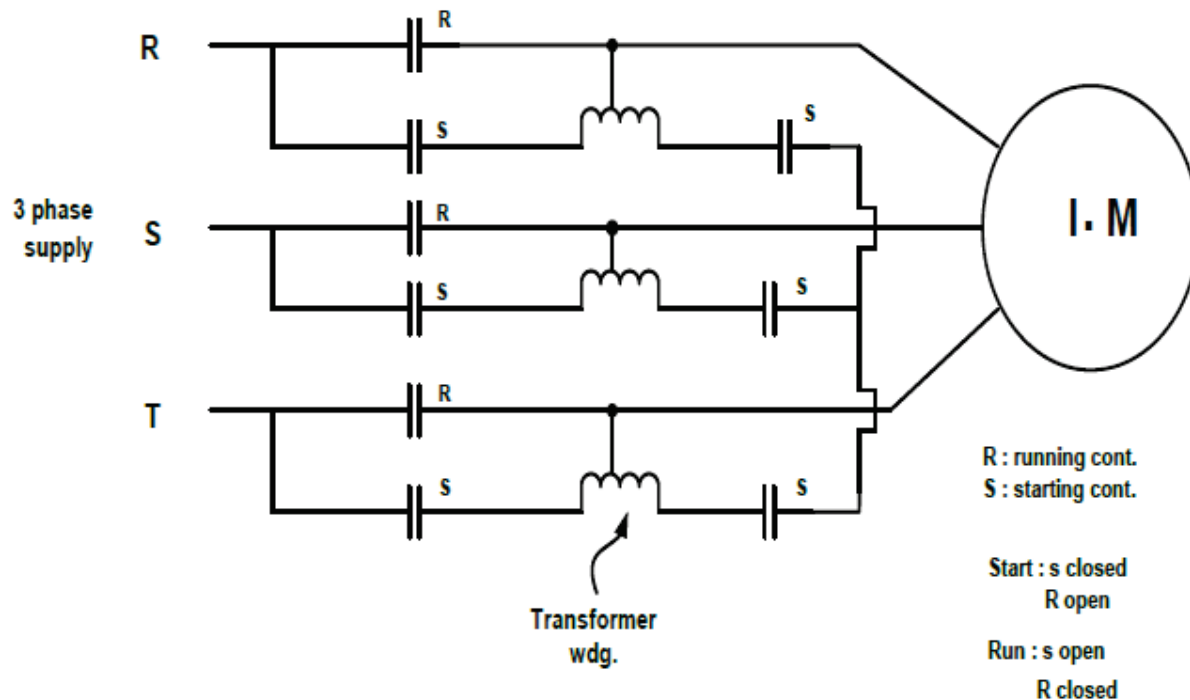


## Starting of three – phase induction motor

Starting of three – phase induction motor :

Three – phase induction motor up to 7.5 h.p may connected directly across the supply line . High starting current of order 500 to 800 percent of full load current . In the case of induction motor of horsepower more than 7.5 h.p , this causes voltage drop in the line and affect other drives connected to the line . Also if a large current flows for a long time , it may overheat the motor and damage the insulation . In such cases , reduced – voltage starting must be used . How we can reduce the voltage at starting ?

**1. A three – phase step – down autotransformer** , as shown in figure below , may be used as reduced voltage starter . As the motor approaches full speed , the autotransformer is switched out of the circuit





2. **Star delta method** of starting may also be used to reduced voltage at starting . In this method the normal connection of the stator windings is delta while running . If these windings are connected in star at start , the phase voltage is reduced , resulting to less current at starting . As the motor approaches full speed , the connected in delta as shown in figure below .

